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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/816,185

04/02/2004

Hiroko Abe

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EXAMINER

ROY, SIKHA

ART UNIT

PAPER NUMBER

2879

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

04/23/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/816,185

Applicant(s)

ABE ET AL.

Examiner

Sikha Roy

Art Unit

2879

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 January 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) 21-40 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 0806,1206,0107.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

The Amendment, filed on January 22, 2007 has been entered and acknowledged by the Examiner.

Acknowledgement is made of the English translation of the foreign priority and hence the former rejection is withdrawn.

Claims 1- 40 are pending of which claims 21-40 have been withdrawn.

Specification

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested:

-- AN ELECTRONIC DISPLAY INCLUDING A LIGHT-EMITTING ELEMENT
AND COLOR FILTER SANDWICHED BETWEEN TWO POLARIZERS---

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 - 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication 2004/0151829 to Boroson et al. and further in view of U.S. Patent 6,762,436 to Huang et al. and U.S. Patent 6,583,770 to Antila et al.

Regarding claim 1 Boroson discloses (Fig. 2B, para [0041], [0093], [00136], [00137]) a light emitting element comprising a cathode 50 and an anode 40 including an organic light emitting material in between and a color filter 52 formed over the second electrode 50 and wherein the light emitting element emits white light. Boroson further discloses (para [0037]-[0039]) depending on which side light is emitted from, the electrode can be selected to be transparent.

Boroson is silent about two polarizers having different polarization angles sandwiching the light emitting element and the filter.

Huang in same field of endeavor discloses (Fig. 2 column 3 lines 29-47) a transparent double side display OLED made from transparent anode and cathode structures transmitting light from both sides.

Therefore it would have been obvious to modify the cathode 50 and the anode 40 of Boroson transmitting light as disclosed by Huang for providing a dual display.

Boroson and Huang do not exemplify two polarizers sandwiching the light-emitting element and the color filter.

Antila in relevant field of dual display discloses (Fig. 1, 3 column 4 lines 45-60) light emitting element sandwiched between two polarizers 1 and 9 which are arranged in such a way that second polarizer 9 has a deflection angle 90° to the first polarizer 1 so that correct polarization level is obtained. It is notes that by using two perpendiculary arranged polarizers on both sides of a panel light transmittance can be controlled.

Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to include to polarizers having different deflection angles sandwiching the

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light emitting element and the color filter of Boroson and Huang as suggested by Antila for providing correct transmittance f light from two sides.

Regarding claims 2- 4 Boroson teaches (para [0059], [0071]) the first light emitting layer 44 (hole transporting layer) is formed of the same material 4, 4'-Bis [N- (1-Naphthalenyl)-N-phenylamino] biphenyl (α -NPD) as the first light emitting layer 503 of the instant application (See [055] of the instant application). Therefore, the layer 44 which, constitutes a similar material and structure as that of the first light emitting layer, inherently exhibits blue emission with maximum intensity in a wavelength region of at least 400 and at most 500 nm. Further, Boroson teaches (para [0093] and [0110]) the phosphorescent material of the second light emitting layer 46 is an organic metal complex with platinum as a central metal (last chemical structure L48 in para [0110]) and the phosphorescent material is also doped with 10 wt.% to the host material. Applicant teaches (page 18, section [0058] of instant application) if the phosphorescent material is an organic metal complex with platinum as a central metal and doped with 10wt% to the host material, this phosphorescent material will generate phosphorescent emission and excimer emission simultaneously and has an emission spectrum with at least two intensity peaks in a wavelength region of at least 500 nm and at most 700 nm. As such, the second light-emitting layer 46 can perform the claimed function.

Regarding claim 5 Antila discloses (Figs. 5a, 5b) the electronic apparatus used in a portable phone.

Regarding claim 6 Boroson, Huang and Antila disclose the claimed invention except two color filters on two sides sandwiching the light emitting device. Boroson teaches (para [00136]) the color filter can be red, green or blue filter to permit only a desired color to pass and be seen by the viewer. It is noted that this device of Boroson Huang and Antila emits light from two sides and hence it would have been obvious to include a color filter on each side and hence two color filters sandwiching the light emitting element so that any desired color can be seen by the viewer.

Claims 7-10 essentially recite the same limitations as of claims 2-5 and hence are rejected for the same reasons (see rejection of claims 2-5).

Claims 11-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication 2004/0151829 to Boroson et al., U.S. Patent 6,762,436 to Huang et al., U.S. Patent 6,583,770 to Antila et al. and further in view of U.S. Patent 6,356,029 to Hunter.

Regarding claim 11 Boroson, Huang and Antila discloses an electronic device with all the limitations same as of claim 1. Boroson, Huang and Antila do not exemplify the first and second transistors, first transistor for determining current value supplied to the light emitting element and second transistor for selecting emission or non-emission states, the first and second transistors being connected in series between the power supply and light emitting element and the gate of the first transistor connected to the first power supply.

Hunter in pertinent art of active matrix EL display device discloses (Fig. 5 column 5 line 45 through column 6 line 5) a first transistor 22 for determining a current value

supplied to the light emitting element 20 and a second transistor 40 for selecting emission and non-emission, first and second transistors are connected in series between a first power supply and the light emitting element 20 wherein the gate of the first transistor is connected to the first power supply. Hunter further teaches (column 2 lines 13-30) that this configuration of driving the EL elements in an active matrix display provides appropriate compensation for the effects of aging of display elements so that desired light output level for a given applied drive signal is maintained regardless of possible variations in the drive current level/light output level characteristics of individual display elements in the array.

Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to include first and second transistors, first transistor for determining current value supplied to the light emitting element and second transistor for selecting emission or non-emission states, the first and second transistors being connected in series between the power supply and light emitting element and the gate of the first transistor connected to the first power supply of the electronic apparatus of Boroson, Huang and Antila as taught by Hunter for providing appropriate compensation for the effects of aging of display elements so that desired light output level for a given applied drive signal is maintained regardless of possible variations in the drive current level/light output level characteristics of individual display elements in the array.

Claims 12-15 essentially recite the same limitations as of claims 2-5 and hence are rejected for the same reasons (see rejection of claims 2-5).

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Claim 16 essentially recites the limitations of claim 11 and claim 6 and hence is rejected for the same reasons (see rejection of claims 6 and 11).

Claims 17-20 essentially recite the same limitations as of claims 2-5 and hence are rejected for the same reasons (see rejection of claims 2-5).

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claim 1 rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 11 of U.S. Patent No. 7,148,502 to Yamazaki et al. Although the conflicting claims are not identical, they are not patentably distinct from each other because the electronic device of claim 1 with light emitting

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element emitting white light, a color filter, two polarizers sandwiching the light emitting element and the color filter and having different deflection angles can be anticipated by the claim11 of USPN 7,148,502 to Yamazaki et al.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patent 6,291,255 to Huang et al. discloses a LCD display with TFT and two perpendicularly arranged polarizers for controlling the light transmittance. U.S. Patent 6,995,816 to Mi et al. discloses (Figs. 5,6 column 8 lines 5-42) polarizer packages for controlling light transmittance and reducing leakage light. U.S. Patent 6,998,772 to Terumoto discloses a double-sided organic EL display.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sikha Roy whose telephone number is (571) 272-2463. The examiner can normally be reached on Monday-Friday 8:00 a.m. – 4:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimeshkumar D. Patel can be reached on (571) 272-2457. The fax phone number for the organization is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Sikha Roy

Sikha Roy
Patent Examiner
Art Unit 2879